

CHAPTER I

INTRODUCTION

Livestock is an integral component of the complex farming system in Bangladesh as it not only serves as a source of meat protein but also a major source of farm power services as well as employment. The livestock sub-sector provides full time employment for 20% of the total population and part-time employment for another 50% of the total population (Begum *et al.*, 2011). Moreover, livestock products, namely, leather and leather products, hides and skins are important exportable items contributing about 13% to total foreign exchange earnings during the 1970s and 1980s (Rahman and Bhuiyan, 1991). Therefore, given versatile nature of the potential contribution offered by the livestock sector including curbing of malnutrition prevalent in Bangladesh, we attempt to provide an evaluation of this sector by examining its availability, distribution, growth, performance and future potential. Bangladesh is one of the most densely populated countries in the world. Population per square kilometer is nearly 854 which are the highest in the world but per capita income is only 273 US dollar. (Huqa, 1999). Most of the people in our country are landless and live in poverty. A large number of populations are unemployed. About 50% of the people suffer from under nourishment

Pigs are fast growing and most prolific livestock breed. Due to these characteristics, they are considered a rich source of animal protein at a low cost. The rearing of pigs is done by poor people who neither have means nor know how to improve production. The pig breeds were used for bristles and meat. However, with the advent of nylon, pig bristles have lost their market value. Indigenous pigs are adopted for survival in most unfavorable condition of malnutrition. In general, pigs are fattened on garbage, kitchen waste and human excreta. Therefore, current of the government endeavor is to improve native pigs by crossbreeding them with superior exotic genes. Exotic breeds include Yorkshire, Landrace, Hampshire and Poland China. Under field conditions, crossbreds are gradually gaining popularity owing to their higher potential for growth. Under such perspective it is imperative that indigenous pig resources might be up-graded to meet the requirement of animal protein. (Taneja, 1995).

Profitable pig production depends largely on the design and provision of suitable housing. Pigs need warmth, a dry bed and protection from winter draughts and summer heat. They have certain minimum requirements for space, fresh air, hygienic conditions and access to feed and water, and accommodation should not predispose to illness or injury. (Moore, 2002). Sows may be kept indoors or outdoors in a variety of systems. Indoors, sows may be kept in individual crates, stalls or tethers or in pens of various sizes. The tether includes a collar or belt that has a chain that is bolted to the side pen wall or to the floor. Outdoors, sows are almost never kept in crates or stalls but rather in pens or pastures of various sizes that allow social grouping. Reasons for choice of a sow housing or penning system include the preferences of the pork producer, economics, legal requirements, geographic location and welfare of the sows. Outdoor-housed sows have few problems with social stress and with skin lesions (such as shoulder lesions). The social stress is reduced because of the large amount of space given the sows and due to their ability to get away from boss sows. (Johnson *et. al.* 2001).

Bangladesh is a densely populated country of South East Asia that has a rich tribal presence. There are about 58 tribes living in different parts of the country. Bangladesh has 1.2 million tribal people, which is just above 1 percent of the total population. Whatever the population they differ in their social organizations, marital customs, rites and rituals, food and other customs from the people of the rest of the country. Most of the tribal people speak in Tibeto-Burman tongues. In Bandarban, thirteen (13) kinds of tribe people lives here. This paper presents the influence of pig farming on the socio-economic structure of the Tribal people of Bandarban Sadar Thana on the basis of data collected through a field survey. In Bandarban, most of the tribals are Buddhist. Since they do not have any religious barrier in consuming pork, like the rest of the population of the country, of which majority are muslims, most of them rear pigs in their backyard. That's why this area was chosen as the study area. The survey covered a random sample of 25 households.

The study was carried out so as to perform the following objectives:

1. To investigate rearing system of pigs under backyard family system in Bandarban hill tracts.
2. To find out the socio-economic status of pig farmers.
3. To identify the cost benefit analysis of pig rearing in Bandarban Hill Tracts.

CHAPTER II

MATERIALS AND METHODS

2.1. Selection of study area:

Usually swine had been rearing by the tribes living mostly in Chittagong Hill tracts. Pork (swine meat) was exclusively used to entertain on various religious occasion in that area. So, I had chosen Bandarban district as my study area to investigate production system of swine.

2.2. Duration of the study:

The study was carried out for a period of 60 days from 17th February' 2018to 16th April' 2018.

2.3. Sources of information:

As the study period was very short, the study was conducted in different areas in Bandarban district indiscriminately. For collecting necessary information, pig owners were interviewed following a questionnaire. They tried to help me at every step of data collection on swine production by sharing their ideas and experience. Following informations, were collected using same questionnaire from different households.

2.3.1. Feeding:

The pigs were fed with the concentrate feed (Figure: 1) twice daily. The other way of feeding is the scavenging system (Figure: 3)

2.3.2. Housing:

The housing systems of the pigs were mainly based on the economic status of the farmer. The pig house data were collected from the farm by visiting. Different types of housing systems were seen. (Figure 4)

2.4. Methods of data collection:

As the data were raw data, it required more hard works and information was extracted from various households indiscriminately as follows:-

2.4.1. Preparation of questionnaire:

Firstly, questionnaire was prepared in accordance with the objectives of the study containing some basic questions with a view to extract information regarding swine production system. In the questionnaire, emphasis was given on socio-economic views of pig owner, housing, feeding, breeding, marketing, and major constraints of pig production along with other supportive information.

2.4.2. Interviewing the pig owner:

For collection of data, various households in different villages were visited. Of which, the pig owners were identified and approached for interviewing and necessary data were collected.

2.4.3. Tabulation of the data:

After collecting, the data were tabulated accordingly.

Picture Gallery



Figure 1: Concentrate feeding of Pig



Figure 2: Piglets with sow



Figure 3: Scavenging



Figure 4: Housing

CHAPTER III

RESULTS

3.1. Socio-economic status of the pig owners:

3.1.1. Educational status:

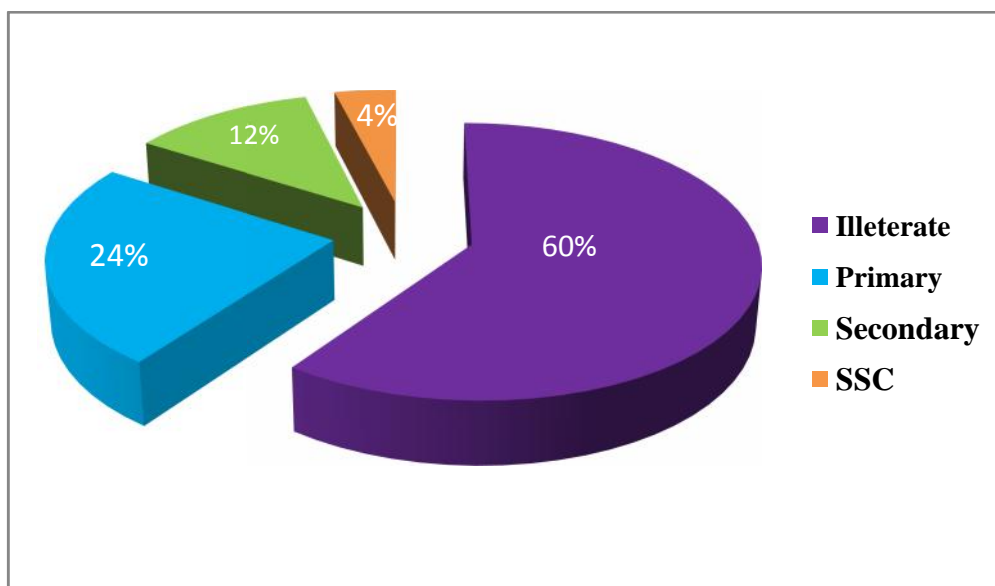


Figure 5: Educational status of pig farmers

The percentage of illiteracy in Bandarban is poor due to the lack of facilities of education and interest of learning in this remote area. From the figure 5, it can be said that majority of the pig owners are illiterate.

3.1.2. Gender and age group of the Pig farmer:

Table 1: Gender group and Age group of the farms.

Category	Number of farm	Percentage
Gender		
Male	8	32%
Female	17	68%
Age group		
Below 25	5	20%
25-40	11	44%
40 and above	9	36%

From the table 1, it can be said that majority of the pig owners are female and belongs to 25 to 45 years of age. The reason behind that is the most of the tribal families are matriarchal. They have to take most of the responsibilities to operate their families.

3.2. Number of pig in the farm:

Table 2: Number of pig in the farm

Number of pig	Number of farm	Percentage (%)
Below 5	1	4
6-8	2	8
9-12	8	32
13-15	12	48
Above 15	2	8

From the table 2, it can be said that majority of the pig farm contain 13 to 15 number of pigs which is 48%. It is due to their traditional housing system where 13 to 15 numbers of pig can easily accommodate.

3.3. Floor type of the farm:

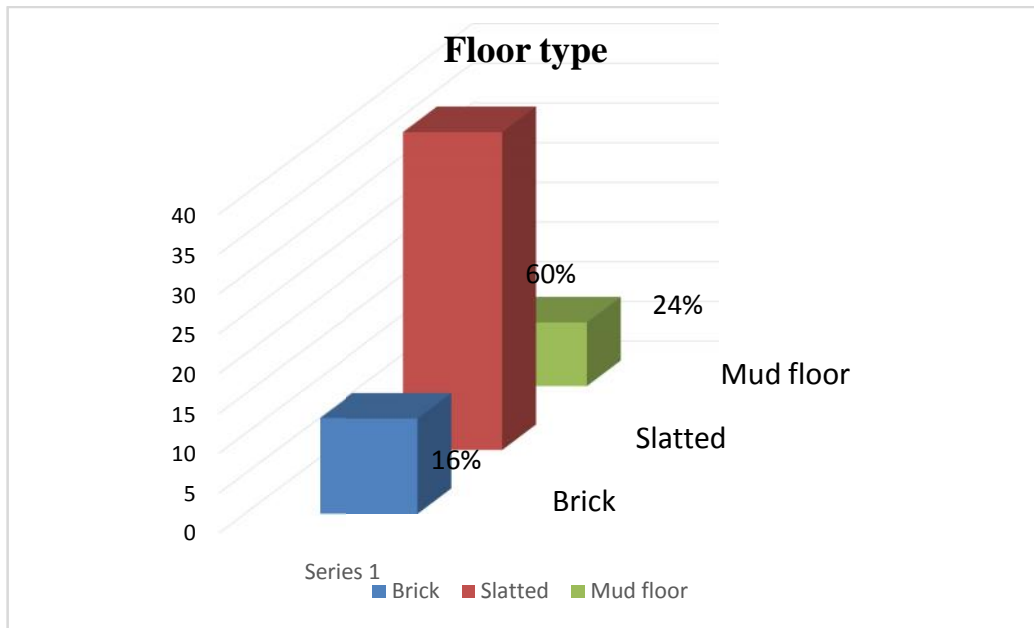


Figure 6: Floor type of farm

From the Figure 8, it can be said that most of the farmers were using slatted (60%) as their floor because of the study area was hilly. They rear pigs in slatted floor.

3.5 Cost benefit analysis:

Table 3: Cost of production and profit of pig farmers on 60 days.

Feed cost depends on feed supply. Farmers use rice, concentrate, grass etc as a feed supply.

Category	
Live weight (kg/pig)	60 kg
Survivability (%)	98%
Feed cost (tk/kg live pig)	273.75
Miscellaneous cost (tk/kg live pig)	0.50
Market price (tk/kg live pig)	333.33
Profit (tk/kg live pig)	59.31
Cost benefit ratio	4.61

The mean weight of pig was 60 kg. The survivability of pig was 98% although farmers didn't use any medicine. The feed cost of per kg live pig was 273.75 tk. The miscellaneous cost of per kg live pig was 0.50 tk. Market price of per kg live pig was 333.33. So the profit per kg live pig was 59.31 tk and the cost benefit ratio was 4.61

CHAPTER IV

DISCUSSION

There are very few study was conducted on the pig farming in Bandarban hill tracts. In the study the results shown that the educational status of the farmer were mostly illiterate, this was due to the poverty of the tribe people and also for the lack of concern for the education. This results is almost similar to the study of (Nahar *et al.*, 2013). The number of the farm owner were found in the study were female which was about 68% because male member of the family were usually involved as daily labor outside of the house. So the farm workings were usually done by the females. (Anower *et al.*, 2017) also got the similar result in case of backyard pig farming in Bangladesh.

In case of the age of the small farm owners were 25-40 years in 44% of the farms. Which indicates that young tribal people were more involved in the farming procedure but this statement was not supported by study of (Duran., 1997).

In this study number of pigs in the farm was below 15 because the study was mainly conducted in the tribal households. Majority of the tribe people were poor, so they can not develop large scale farm without financial support of government and also other NGOs. The reason of that type of pig number was that, they can easily accommodate this numbers in their households (Baker *et al.*, 1968).

In this study most of the farm (60%) used the slatted type floor in the pig house. This was due to the hilly area. The tribe people were used to build house on the bamboo slate. So this result is significantly different from other studies (Anower *et al.*, 2017)

The average body weight of the pig was about 60kg in this study which is significantly lower from the ideal body weight of the pig (Chwen *et al.*, 2001). This was due to the poor quality feed stuff used by the owners. So the pigs did not get the optimum nutrition. On the other hand another reason was the breed characteristics of the pigs. They mainly used native pigs which cannot gain the body weight of the fast growing pig breeds.

Survivability of pigs were found in my study was 98% which was similar to some other studies (Britt., 1998; Anower *et al.*, 2017). This was due to the high disease resistance of the pigs used in the households. The average cost for the feeding of the pig was 273.5 tk/pig which was lower than some other studies (Rommel *et al.*, 2018). The lower feed cost was due to scavenging behavior of the pig. The pigs were let open in the morning this helps to reduce the amount of feed supplement. That results in the lowering the feeding cost.

The cost benefit ratio was found 4.61 which was very good. This high amount of ratio was achieved because owners work on the own farm that reduce the labor cost and they produce very economic housing and no bedding materials. The other cause is the scavenging. Scavenging significantly lower the feed cost, which is helpful for more profit (Keynes., 2007).

CHAPTER V

CONCLUSION

From my study it reveals that the backyard pig farming is a profitable business. Tribal poor women can earn a handsome amount of money with minimum amount of investment and effort by doing pig farming. To upgrade the lifestyle of tribal people government should provide the provision of training and loan to the tribal women for scientific pig rearing which would be very helpful for the economic upgradation of the rural tribal people as well as Bangladesh.

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BIOGRAPHY

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APPENDIX

PIG REARING SYSTEM AND SOCIO-ECONOMIC STATUS OF TRIBE PEOPLE IN BANDARBAN HILL TRACTS

1. General information of the Household:

- a) Name of the House:
- b) Owner of the House: c) Educational status:
- d) Age: e) Amount of land owned:f) Address:
- g) Total no. of pigs: Male:Female:Piglets:h) Breed of pigs:
- i) Purpose of farming:

2. Housing system:

- a) Type of house: Floor / Slatted floor / Others.....b) Housing materials:
- c) Ceiling type: Tin/Chawn /Mixed /others...d) Floor type: Soil / Brick / Cemented / others.....
- e) Direction: East-west / North-south / Others.....
- f) Length:Width:Height:g) Light:Ventilation:
- h) Procedure of minimizing high/low temperature:

3. Feeding system:

- a) Individual feeding (name of feeds): b) Group feeding (name of feeds):

Sl. no.	Ingredients	Amount (kg/day)	Proportion (g/100g)	Time of feeding	
				Am	Pm
1.					
2.					
3.					

4. Breeding system:

- a) Av. age of sexual maturity: Male:Female:b) Signs of heat:.....
- c) Time of service following heat:d) Type of service:
- No. of service.....e) Av. litter size: Birth wt.....Weaning period:
- f) Growth rate: Pre-weaning: Post-weaning:.....

5. Prevalence of common diseases and health problems:

Name of diseases	Type	Total cases	Relative proportion (%)

6. Marketing system:

- a)Organized:....b)local:.....(i)As live (ii) As dressed (iii) Others.....
- c)Av. age of marketing:d) Market price:e) Is it profitable? (i) Yes (ii)No

7. Major constraints of pig production:

- a)Related to housing:..... .b) Related to feeding:
- c) Related to breeding:d)Related to disease prevalence: e) others.....

8. Recommendation to overcome existing problems:

Thank you very much for your cooperation

Name of the interviewee.....
Date.....
Signature.....

Name of the interviewer.....
Date:
Signature